Climate change: threat or opportunity for Belgian sea fisheries?

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Sector analysis

Describe fleet/fisheries sector

- **Important for coastal community of Flanders**
- **54 vessels large fleet segment, 48 small fleet segment**
- **Strong specialization**
  - **Fishing method: > 90% beam trawling**
  - **Target species: mainly flatfish**
- **Complex/changing circumstances:**
  - **regulations, fuel prices, fish stocks, fish prices, etc**

Climate change

Identify impact climate change

- **Primary effects**
  - **defined and modelled by CLIMAR partner**
- **Secondary effects**
  - **assessed per effect category (ecologic, economic, social)**

Adaptation strategies

Develop adaptation strategies

- **Identify possible measures**
  - **Changing operation and fleet structure**
  - **Other target species**
  - **Other fishing methods, etc**

⇨**Develop ≠mid- and long term adaptation strategies for the fleet (2040–2100)**

Evaluation

Evaluate adaptation strategies

- **take into account implications of the ≠ strategies**
- **evaluate the strategies on their sustainability using a model based evaluation framework**

Policy support

Formulate recommendations

Which should contribute to the development of the Belgian fishery into an

- **innovative, flexible and sustainable activity;**
- **able to cope with changing circumstances, including climate changes.**

Effect categories

Ecologic

- Water quality
- Habitat quality
- Habitat change
- Biodiversity
- Ecosystem productivity
- Geographical shift
- Non-indigenous species
- Ecosystem interactions

Economic

- Production
- Exploitation costs
- Damage costs
- New opportunities
- Economic result

Social

- Employment
- Safety
- Health
- Cultural value
- Welfare

Effects relevant for sector

(In) direct effect on

- **Operational functioning of the fleet:**
  - **gear efficiency**
  - **accessibility fishing grounds**
  - **risks crew/vessels, etc**
- **(Potential) commercial stocks:**

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Characteristics fish populations

- relative large populations
- migration possibilities
- high fecundity
- ≠live stages
- benthic or pelagic
- natural fluctuations

≠ response levels

- Behaviour
- Population dynamic
- Ecosystem response

Influences (in)direct

- Migration
- Growth
- Recruitment
- Mortality

Adaptive capacity influenced negatively by

- high rate (expected) climate change
- additional pressure (e.g. fishing pressure)

⇨ **changed densities and/or geographical shift**

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